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ZEISS DIAVARI-DA 1.5 · 6x Riflescope

Instructions for Use of the
DIAVARI-DA 1.5 · 6x Riflescope
for the G3 Rifle

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C A R L Z E I S S · Oberkochen/Württ.

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1.	Instrument description	
1.1.	Designation: Diavari-DA 1,5 – 6x Riflescope for G3 Rifle	
1.1.1.	Cat. No.: 52 10 67-9998	
1.2.	Application: The riflescope is intended for use with the G3 rifle. It serves for aiming at the target and allows observation even with longer distances. The maximum shooting distance is 600 m.	
1.3.	Technical data	
1.3.1.	Optical data	
1.3.1.1.	Telescope magnification	1.5 – 6x
1.3.1.2.	Entrance pupil diameter	19 to 36 mm
1.3.1.3.	Twilight performance	Z 4.2 to 14.7
1.3.1.4.	Exit pupil diameter	12.7 to 6 mm
1.3.1.5.	Distance between exit pupil and last lens vertex	approx. 80 mm
1.3.1.6.	Diopter range	± 2 dpt.
1.3.1.7.	Field of view at 1000 m	200 m to 67 m
1.3.1.8.	Reticle	cross hair with horizontal graduation
1.3.2.	Mechanical data and dimensions	
1.3.2.1.	Sighting angle setting lockable between 10 and 600 m = about 6‴	
1.3.2.2.	Overflow of adjustment	± 2‴
1.3.2.3.	Windage adjustment lockable at intervals of 0.25‴	± 2.5‴
1.3.2.4.	Overflow of adjustment	± 1‴
1.3.2.5.	Overall riflescope length	about 312 mm
1.3.2.6.	Objective tube diameter	41 mm
1.3.2.7.	Center tube diameter	30 mm
1.3.2.8.	Eyepiece tube diameter	38 mm
1.3.2.9.	Distance between optical axis and bore axis (depending on the mount)	78 mm
1.3.3.	Weights	
1.3.3.1.	Riflescope	500 g
1.3.3.2.	Riflescope with mount	950 g

1.4. Design of the Riflescope

1.4.1. General
The riflescope is a monocular telescope with direct-vision assembly and an erecting lens system. For setting the sighting angle, the crosshair is shifted vertically. Magnification can be varied manually between 1.5 and 6x.

1.4.2. Mechanical design (Fig. 1)
The riflescope consists of main tube (1) with eyepiece tube (2).

1.4.2.1 There are the following parts on main tube (1):
elevation adjustment (5), windage adjustment (6).

1.4.2.2. Eyepiece tube (2) consists of rotating sleeve (3) for change of magnification and of eyepiece mount (4).

2. Operation

2.1. Control elements (Fig. 1)

2.1.1. The image is focussed with eyepiece mount (4) within a range of ± 2 dpt

2.1.2. The reticle is designed as shown in Fig. 3, i.e. crosshair with horizontal graduation.

2.1.3. The sighting angle is set with elevation adjustment (5).

2.1.4. Windage is corrected with windage adjustment (6).

2.1.5. Magnification is changed with rotating sleeve (3).

2.2. Initial operation and adjustment of the riflescope (Fig. 2)

2.2.1. Attach riflescope (7) with mount (8) to rifle. Ensure proper mounting.

2.2.2. Set optimum focus by turning eyepiece mount (4) (Fig. 1) from + to –.

2.2.3. Set locking ring (9) of elevation adjustment to 100 m (position "1") and locking ring (10) of windage adjustment to "0"

2.2.4. Loosen screws (11) with screwdriver.

2.2.5. Set rifle sight to 100 m and aim at a target at a distance of 100 m over mechanical sights.

2.2.6. Adjust crosshair of riflescope to the same target. Use coin for setting elevation adjustment (5) (Fig. 1) and windage adjustment (6) (Fig. 1). Take care that setting of locking rings remains unchanged (see section 2.2.3.).

2.2.7. Fire a few trial shots and if necessary adjust crosshair after each shot. The sense of rotation for shot correction is engraved on the caps of elevation and windage adjustments (5) (Fig. 1) and (6) (Fig. 1).

2.2.8. After adjustment retighten screws (11).

2.2.9. Depending on the distance between 10 and 600 m, elevation adjustment (5) (Fig. 1) is now set to the corresponding positions. The crosshair is shifted vertically and thus set to the sighting angle related to the distance. On the locking ring white figures are engraved for distances of 100 m and more (in hectometers) and yellow figures for distances below 100 m.

3. Maintenance

3.1. Check optics for cleanliness.
Clean optics only with dust brush and cloth after breathing on it, try not to touch optics. Slight scratches on the outer optical surfaces do not impair functioning of the instrument. Cracked glass elements have to be replaced however (return instrument for repair).

3.2. Remove dust and dirt from outer mechanical surfaces with dry cloth or brush. Remove excessive dirt (e.g. oil or grease) with a naphtha-soaked cloth. Carefully clean movable parts and contact surfaces.

3.3. Check control elements for smoothness of motion. Apply small amount of acid-free oil.

FIG. 1

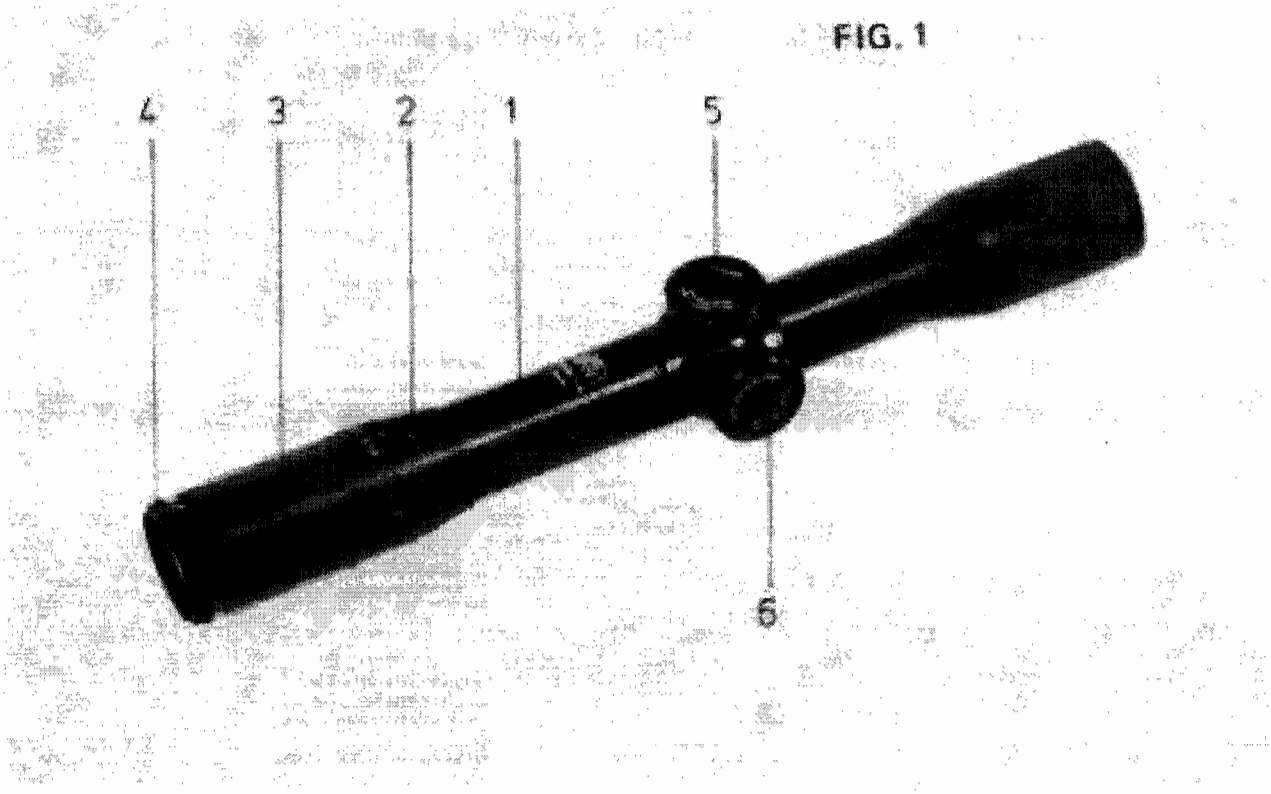

Fig. 1
DIAVARI-DA 1.5 – 6x Riflescope for G3 Rifle

FIG. 2

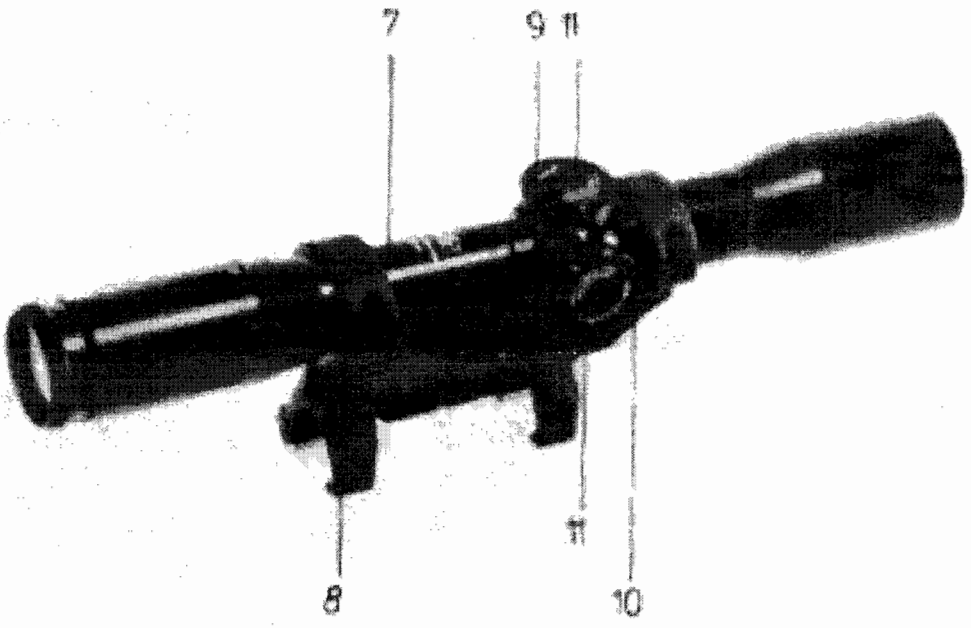

Fig. 2
Riflescope with mount

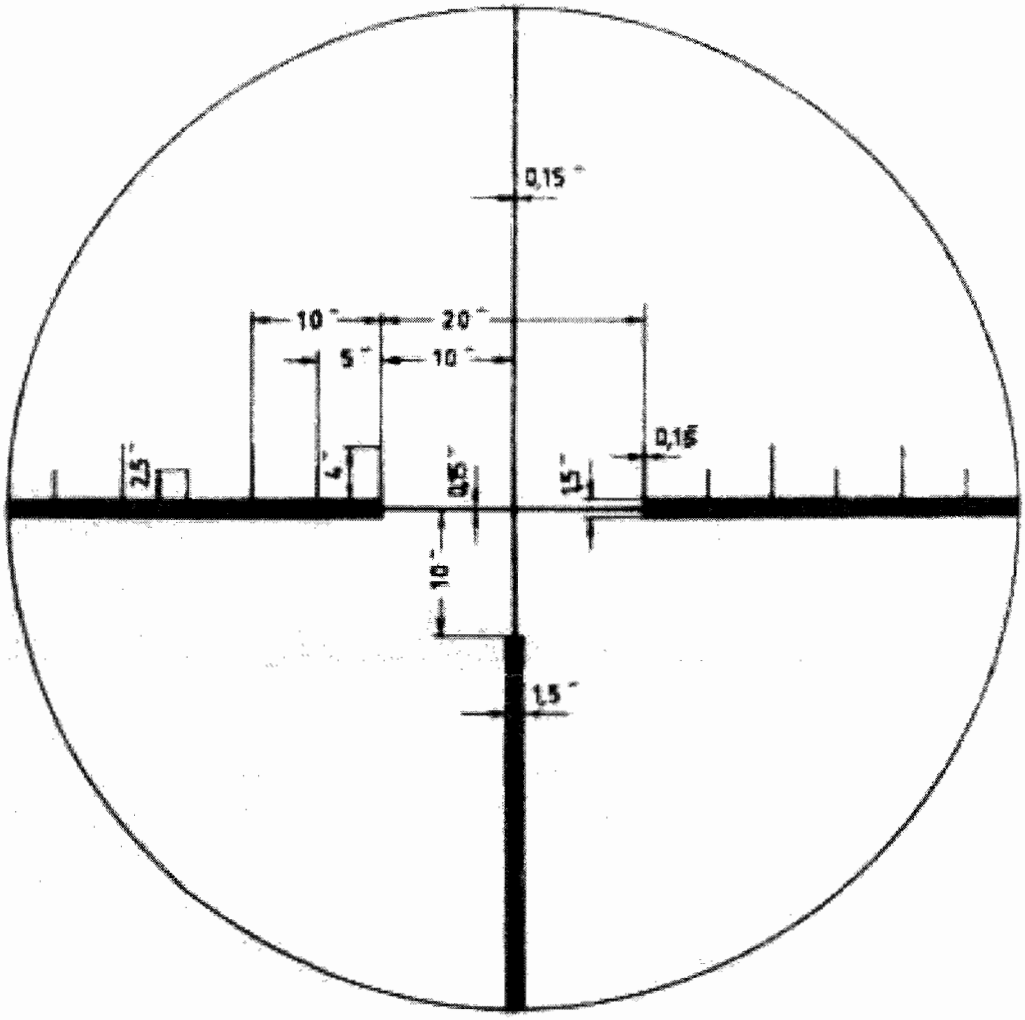

Fig. 3

Measuring reticle

This reticle serves to determine the distance with a given target size.

The distance is given by

$$\frac{\text{target size in m} \times 1000}{\text{number of graduations}} \quad * \text{ distane}$$

Example: A car of 5 m length covers 25 graduations on the reticle.

$$\text{distance} = \frac{5 \times 1000}{25} = 200 \text{ m}$$